1. A method comprising the following successive steps:

1) synthesising at least one bifunctional alkenyloxyaryl or alkenylaryloxyaryl type compound with general formula $[R\text{-}CH{=}CH\text{-}(X)\text{-}O]_n\text{-}Ar\text{-}Q$,

where Q is a group which reacts with hydrogen carried by a heteroatom selected from the group formed by oxygen, nitrogen and sulphur or a precursor of such a group, and where:

- n is in the range 1 to 20;
- R is hydrogen or a linear or branched alkyl group or a linear or branched alkoxy group or a hydroxyl or an aryl group, which may be substituted;
- X is a divalent linear alkyl group containing more than one carbon atom or a branched divalent alkyl group, or an aryl group, which may be substituted with at least one group selected from the group formed by hydrogen, alkyl, alkoxy, hydroxyl or trihalogenoalkyl groups;
- Ar is an aryl or polyaryl group, optionally substituted with at least one hydrogen atom or at least one group selected from the group formed by alkyl, alkoxy, hydroxyl, trihalogenoalkyl, silyl, thiol, amino, aminoalkyl, amide, nitro, nitrosamino, N-amino, aldehyde, acid or ester groups;

2) reacting at least one hydrogen of an alcohol, amine or thiol function of at least one chiral unit of a product with at least one group Q of the bifunctional compound of step 1), to synthesise at least one chiral compound.

2. A method according to claim 1, in which group Q is selected from the group formed by the following groups: -N=C=O or a precursor thereof; $-NH_2$, or $-CON_3$, -COC1 or a precursor thereof; -COOH; -N=C=S'; $-CH_2\text{-}Y$,

where Y is C1 or Br or I or methylsulphonyloxy or paratoluenesulphonyloxy or 3,5-dimethylphenylsulphonyloxy.

3. A method according to claim 1 ~~or claim 2~~, comprising a supplementary hydrosilylation step, before or after step 2), to transform at least a portion of the alkenyl moieties R-CH=CH- using a silane $(R_1, R_2, R_3)Si\text{-}H$ generally in the presence of a metallic complex derived from platinum or rhodium to $(R_1, R_2, R_3)\text{-}Si\text{-}CH(R)\text{-}CH_2\text{-}$ moieties, where:

- R_1 is a hydrogen or a methoxy or ethoxy group or a halogen or an amino or alkylamino

group;

- R_2 and R_3, which may be identical to or different from R_1, are alkoxy, hydroxyl, trihalogenoalkyl, linear or branched alkyl or aryl groups;
- R is hydrogen or a linear branched alkyl group or a linear or branched alkoxy group or a hydroxyl group or an aryl group which may be substituted.

4. A method according to ~~any one of claims 1 to 3~~ claim 1, in which the chiral compound is physically deposited on a support to obtain a chiral support.

5. A method according to ~~any one of claims 1 to 3~~ claim 1, in which the chiral compound is deposited then grafted onto a support by covalent bonding, the support having been reacted with at least one group selected from the group formed by alkoxy, halogeno or aminosilane groups to form a derivative also carrying a function of the type -SH, -SiH or -CH=CH-, with at least a portion of the alkenyl moieties, to obtain a chiral support.

6. A method according to claim 4 ~~or claim 5~~, in which the support is selected from the group formed by gel type supports of native or modified silica, oxides of zirconia, magnesium, aluminum or titanium, glass beads, carbons or any organic polymer.

7. A method according to ~~any one of claims 1 to 3~~ claim 1, in which the chiral compound is polymerised by cross-linking at least a portion of the alkenyl moieties to obtain polymer beads which essentially constitute a chiral support.

8. A method according to ~~any one of claims 4, 5 or 7~~ claim 4, in which the chiral support obtained in the third step is used in an operation for separating chiral compounds or preparing enantiomers.

9. A method according to claim 8, in which said operation is selected from the following methods: liquid chromatography, gas chromatography, supercritical chromatography, subcritical chromatography, centrifugal chromatography, electrophoresis, electrochromatography, or any membrane separation process, also asymmetrical synthesis.

10. A process for synthesising polymers comprising the following successive steps:

1) synthesising at least one bifunctional alkenyloxyaryl or alkenylaryloxyaryl type compound with general formula [R-CH=CH-(X)-O]$_n$-Ar-Q,

where Q is a group selected from the group formed by the following groups: -N=C=O or a precursor thereof; $-NH_2$ or $-CON_3$; -COC1 or a precursor thereof; -COOH; -N=C=S; $-CH_2Y$, where Y is Cl or Br or I or methylsulphonyloxy or paratoluenesulphonyloxy or 3,5-dimethylphenylsulphonyloxy, and where

- n is in the range 1 to 20;
- R is hydrogen or a linear or branched alkyl group or a linear or branched alkoxy group or a hydroxyl or an aryl group, which may be substituted;
- X is a linear or branched alkyl group or an aryl group, which may be substituted with at least one group selected from the group formed by hydrogen, alkyl, alkoxy, hydroxyl and trihalogenoalkyl groups;
- Ar is an aryl or polyaryl group, optionally substituted with at least one hydrogen atom or with a group selected from the group formed by alkyl, alkoxy, hydroxyl, trihalogenoalkyl, silyl, thiol, amino, aminoalkyl, amide, nitro, nitrosamino, N-amino, aldehyde, acid or ester groups;

2) polymerisation by the alkenyl moiety or by the R_1 group of the bifunctional compound of step 1), to synthesize at least one polymer functionalised by a group Q.

11. A bifunctional alkenyloxyaryl or alkenylaryloxyaryl type compound with general formula [R-CH=CH=(X)-O]$_n$-AR-Q,

where Q is a group which is reactive towards a hydrogen carried by a heteroatom selected from the group formed by oxygen, nitrogen and sulphur, or a precursor of such a group and where:

- n is in the range 1 to 20;
- R is hydrogen or a linear or branched alkyl group or a linear or branched alkoxy group or a hydroxyl or an aryl group, which may be substituted;
- X is an optional linear alkyl group carrying more than one carbon atom or a branched alkyl group, or an aryl group, which may be substituted with at least one group selected from the group formed by hydrogen, alkyl, alkoxy, hydroxyl and trihalogenoalkyl groups;

- Ar is an aryl or polyaryl group, which may be substituted with at least one hydrogen atom or with at least one group selected from the group formed by alkyl, alkoxy, hydroxyl, trihalogenoalkyl, silyl, thiol, amino, aminoalkyl, amide, nitro, nitrosamino, N-amino, aldehyde, acid or ester groups;

excluding the following compounds: 4-allyloxyaniline, 4-allyloxybenzoic acid, its acid chloride, and 4-allyloxyphenylisocyanate.

12. A compound according to claim 11, in which group Q is selected from the group formed by the following groups: -N=C=O or a precursor thereof; $-NH_2$ or $-CON_3$; -COCl or its precursor; -COOH; -N=C=S; $-CH_2Y$, where Y is Cl or Br or I or methylsulphonyloxy or para-toluenesulphonyloxy or 3,5-dimethylphenylsulphonyloxy.

13. A chiral compound which can be obtained by reaction of at least one hydrogen of an alcohol, amine or thiol function of at least one chiral unit of a product with at least one group Q of the bifunctional compound according to claim 11 or claim 12.

14. A chiral compound which can be obtained by hydrosilylation of the chiral compound of claim 13 to transform at least a portion of the alkenyl moieties R-CH=CH- using a silane (R_1, R_2, R_3)Si-H generally in the presence of a metallic complex derived from platinum or rhodium to (R_1, R_2, R_3)-Si-CH(R)-CH_2- moieties, where:

- R_1 is a hydrogen or a methoxy or ethoxy group or a halogen or an amino or alkylamino group;
- R_2 and R_3, which may be identical to or different from R_1, are alkoxy, hydroxyl, trihalogenoalkyl, linear or branched alkyl or aryl groups;
- R is hydrogen or a linear branched alkyl group or a linear or branched alkoxy group or a hydroxyl group or an aryl group which may be substituted.

15. A chiral compound which can be obtained by hydrosilylation of the bifunctional chiral compound of claim 11 or claim 12, to transform at least a portion of the alkenyl moieties R-CH=CH- using a silane (R_1, R_2, R_3)-Si-H generally in the presence of a metallic complex derived from a platinum or rhodium to (R_1, R_2, R_3)-Si-CH(R)-CH_2- moieties, where:

- R_1 is a hydrogen or an alkoxy group or a halogen or an amino or alkylamino group;
- R_2 and R_3, which may be identical to or different from R_1, are alkoxy, hydroxyl, trihalogenoalkyl, linear or branched alkyl or aryl groups;

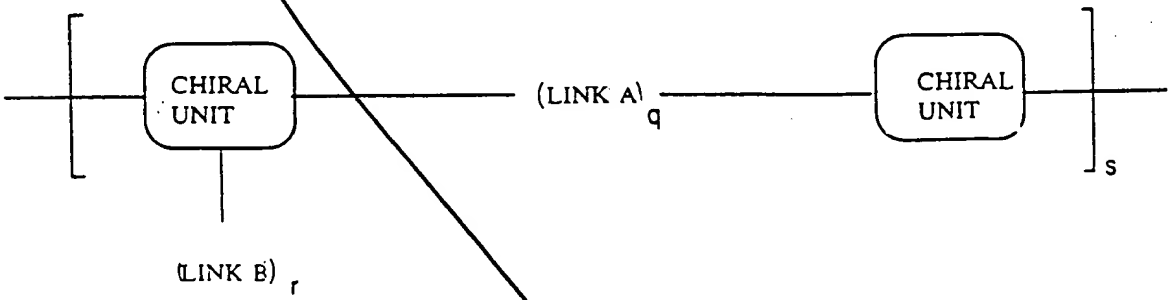
then by reacting at least one hydrogen of an alcohol, amine or thiol function of at least one chiral unit of a product with at least one group Q of the compound of claim 11 or claim 12.

16. A chiral compound which can be obtained by hydrosilylation of an analogous bifunctional compound to the compound according to claim 11 or claim 12, where X represents a methylene group, to transform at least a portion of the alkenyl moieties R-CH=CH- using a silane (R_1, R_2, R_3)Si-H generally in the presence of a metallic complex derived from platinum or rhodium to (R_1, R_2, R_3)Si-CH(R)-CH_2- moieties, where:

- R_1 is a hydrogen or a methoxy or ethoxy group or a halogen or an amino or alkylamino group;
- R_2 and R_3, which may be identical to or different from R_1, are as defined in claim 15.

17. A chiral compound according to any one of claims 1 to 9 or 13 to 16, in which said chiral unit of a product is a glycosidic unit of a product selected from holosides, heteroholisides, oligosides, cyclooligosides, heterooligosides, polyosides, heteropolyosides, enzymes and proteins.

18. A polymerised and cross-linked chiral compound according to ~~any one of claims 13 to 17~~ claim 13, or its ester, amide, urea, carbamate, thioester or thiocarbamate derivatives with general formula (I):

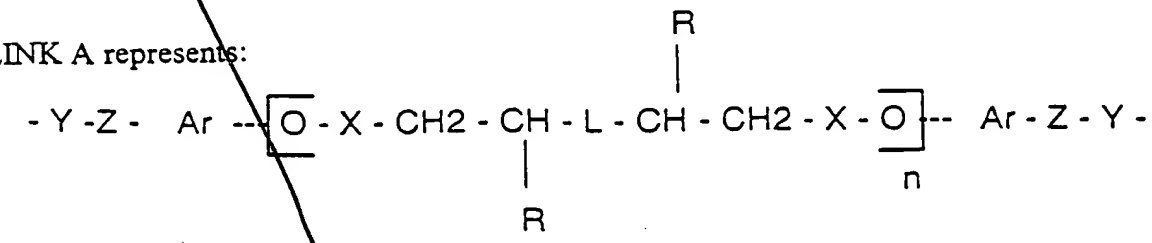


where:

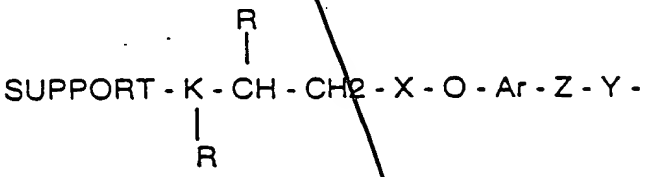
- q is at least 1 and less than 20;
- s is at least 1 and less than 20000;

- if r = 0, the compound is a pure cross-linked chiral polymer, oligomer or monomer;
- if r ≥ 1, the compound is a chiral polymer, oligomer, or monomer which is cross-linked in a three-dimensional network and bonded to a cross-linked support.

LINK A represents:



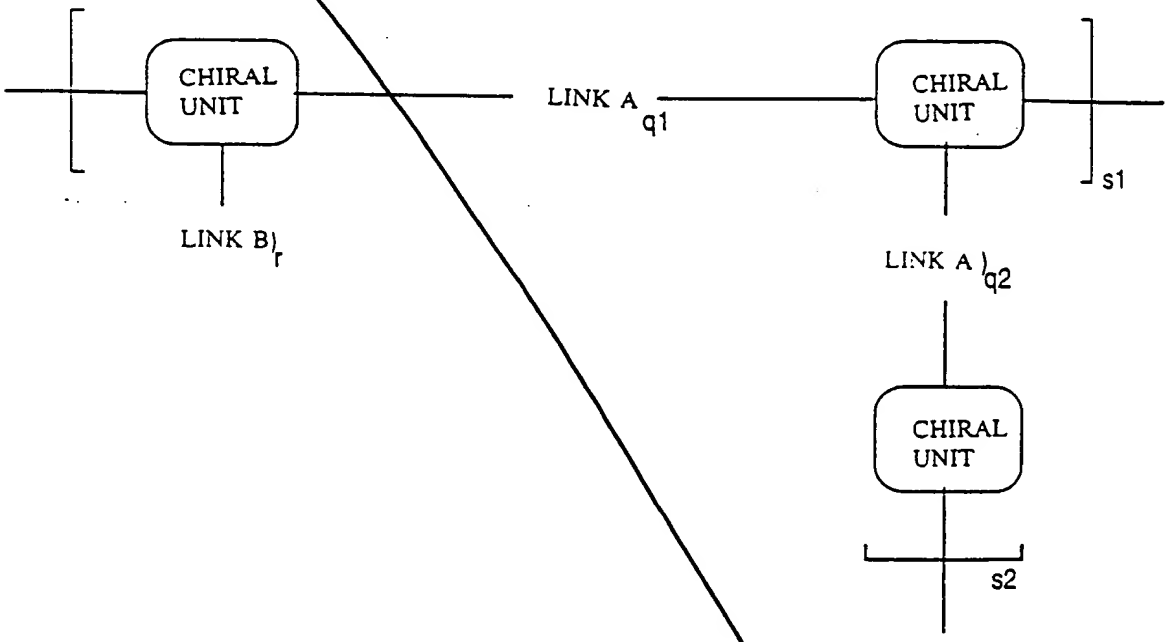
LINK B represents:



- "chiral unit" represents a monomeric, oligomeric, cyclooligomeric or polymeric chiral compound and optionally comprises a primary or second amine function or a primary, secondary or tertiary hydroxyl function or a sulphhydryl function and in which all or a portion of these functions have optionally been modified to the ester, amide, urea, carbamate, thioester or thiocarbamate;
- Z represents a $-CH_2-$ group or a -CO- group or a -NH-CO- group or a -NH-CS- group;
- Y represents a sulphur or oxygen atom or the amino group;
- n is in the range of 1 to 20;
- Ar represents an aryl or polyarl group;
- X represents an alkyl or aryl group;
- R represents an alkyl group or hydrogen;
- L represents a single bond of a bis-sulphhydryl or a silane or an ethylene group which may be substituted or a disiloxane;
- K represents a single bond or a siloxane or a silane;

- "support" represents an organic or mineral support; functionalised by an alkene or a hydrogenosilane or a sulphhydryl.

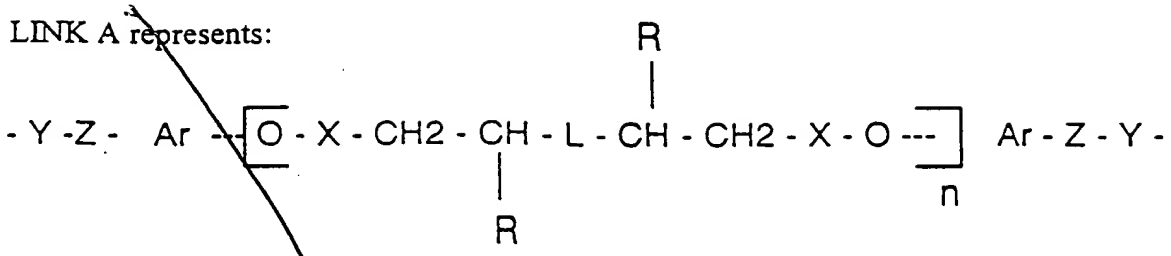
19. A polymerised and cross-linked chiral compound according to ~~any one of claims 13 to 17~~ claim 13, or its ester, amide, urea, carbamate, thioester or thiocarbamate derivatives, with general formula:



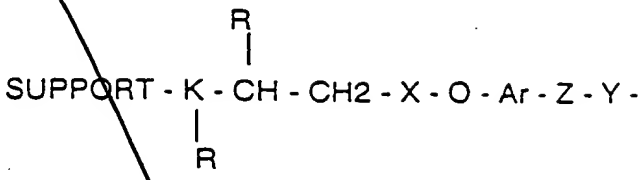
where:

- q_1 and q_2 are each at least 1 and less than 20;
- s_1 and s_2 are each at least 1 and less than 20000;
- if r = 0, the compound is a pure cross-linked chiral polymer, oligomer or monomer;
- if $r \geq 1$, the compound is a chiral polymer, oligomer or monomer which is cross-linked in a three-dimensional network and bonded to a cross-linked support;

LINK A represents:



LINK B represents:

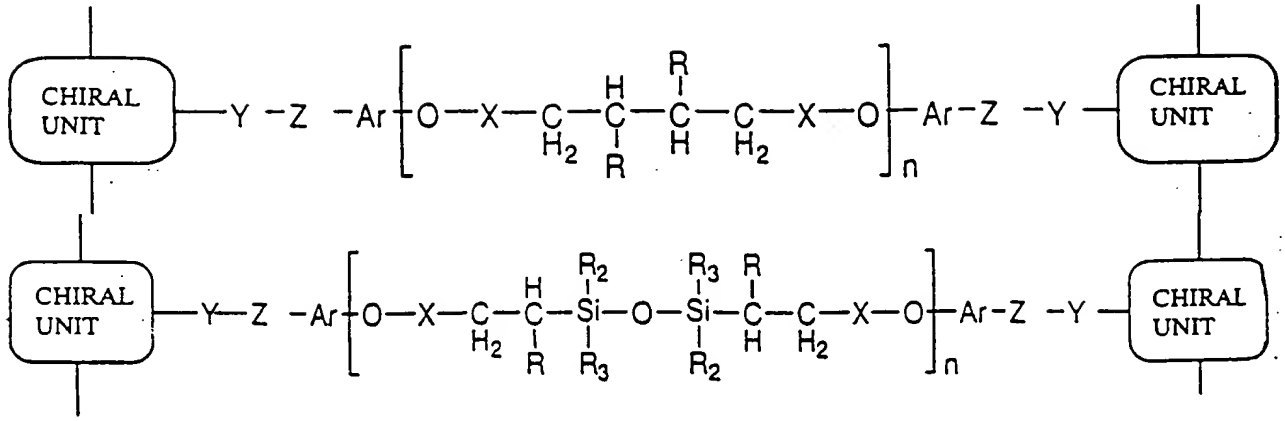


- "chiral unit" represents a monomeric, oligomeric, cyclooligomeric or polymeric chiral compound and optionally comprises a primary or second amine function or a primary, secondar or tertiary hydroxyl function or a sulphhydryl function and in which all or a portion of these functions have optionally been modified to the ester, amide, urea, carbamate, thioester or thiocarbamate;
- Z represents a $-CH_2-$ group or a -CO- group or a -NH-CO- group or a -NH-CS- group;
- Y represents a sulphur or oxygen atom or the amino group;
- n is in the range of 1 to 20;
- Ar represents an aryl or polyarl group;
- X represents an alkyl or aryl group;
- R represents an alkyl group or hydrogen;
- L represents a single bond of a bis-sulphhydryl or a silane or an ethylene group which may be substituted or a disiloxane;
- K represents a single bond or a siloxane or a silane;
- "support" represents an organic or mineral support; functionalised by an alkene or a hydrogenosilane or a sulphhydryl.

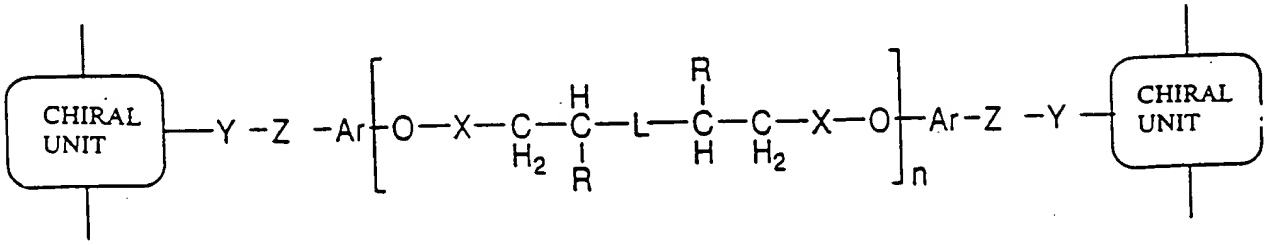
Subject cont'd

20. A compound according to claim 18, having the following formulae:

Sub E4 cont'd


CHIRAL UNIT
Y
Z
Ar
O
X
C
H2
H
R
n

CHIRAL UNIT
Y
Z
Ar
O
X
C
H2
H
R
Si
R2
R3
n


CHIRAL UNIT
Y
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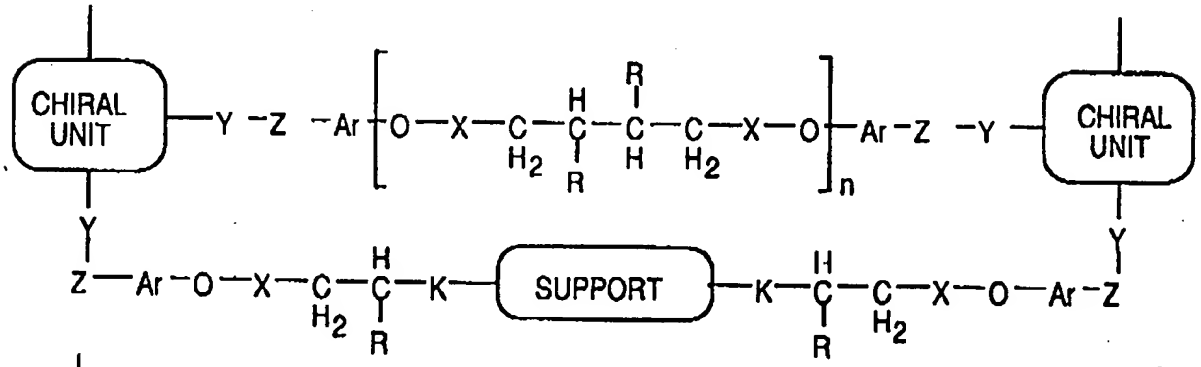
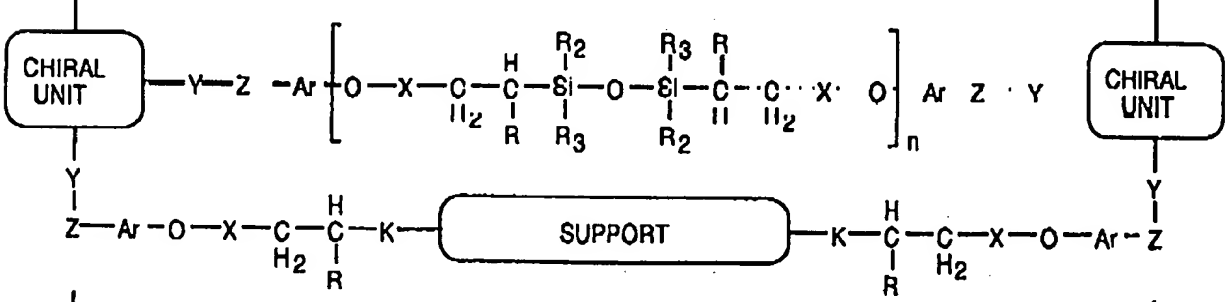
H2
H
R
L
n


CHIRAL UNIT
Y
Z
Ar
O
X
C
H2
H
R
K
SUPPORT


CHIRAL UNIT
Y
Z
Ar
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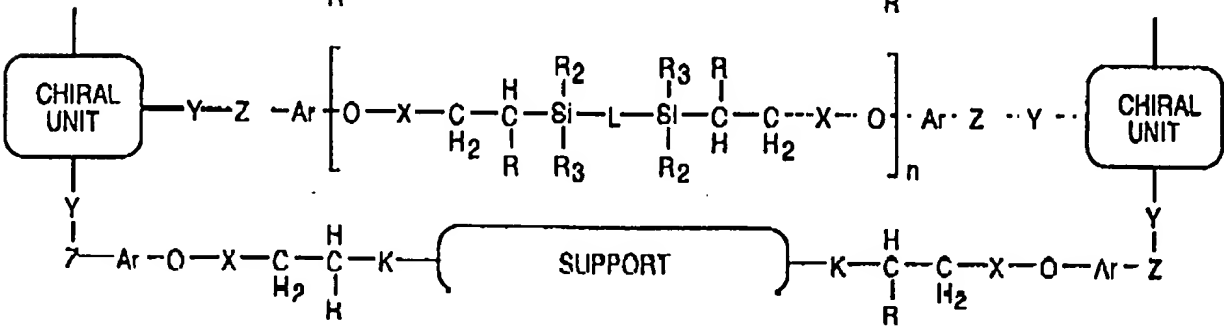
X
C
H2
H
R
Si
R2
R3
K
SUPPORT


CHIRAL UNIT
Y
Z
Ar
O
X
C
H2
H
R
Si
R2
R3
L
K
SUPPORT

21. A chiral support obtainable from a chiral compound according to ~~any one of claims 13 to 19~~ claim 13 by physical deposition on a support.

22. A chiral support obtainable from a chiral compound according to ~~any one of claims 13 to 20~~ claim 13 and a support, said support having been reacted with at least one group selected from the group formed by alkoxy, halogeno or aminosilane groups to form a derivative, said group also comprising a function of the type -SH, -SiH or -CH=CH-, by forming covalent chemical bonds using at least part of the alkenyl moieties in said chiral compound.

23. A chiral support comprising at least one chiral compound according to ~~any one of claims 13 to 20~~ claim 13 and at least one support.

24. A chiral support according to claim 23, in which the chiral compound is chemically bonded to said support, using at least one covalent chemical bond.

25. A chiral support according to ~~any one of claims 21 to 24~~ claim 21, in which the support is selected from the group formed by gel type supports of native or modified silica, oxides or zirconia, magnesium, aluminum or titanium, glass beads, carbons or any organic polymer.

26. A chiral support obtainable from a chiral compound according to ~~any one of claims 13 to 20~~ claim 13 by polymerisation, generally by cross-linking at least a portion of the alkenyl moieties of said chiral compound to obtain polymer beads.

27. A chiral support comprising beads of a chiral compound according to ~~any one of claims 13 to 20~~ claim 13.

28. A process for separating chiral compounds or for preparing enantiomers using a chiral

chromatographic support obtained from claim 21 ~~any one of claims 21 to 27~~ in an operation selected from the following methods: liquid chromatography, gas chromatography, supercritical chromatography, subcritical chromatography, centrifugal chromatography, electrophoresis, electrochromatography, or any membrane separation process, also asymmetrical synthesis.